**Name**: **Reba Hekker** **Subject Area: Integrated Algebra**

**Date**: **6/30/11**  **Grade Level: 8th grade**

**Time Required: 42 minutes**

**Description**: This is the second lesson in a unit on radical expressions and right angle trigonometry. The purpose of this lesson is to teach students how to combine radical expressions using the four basic operations (addition, subtraction, multiplication and division). First, students will complete an Anticipation Guide responding to statements about combining radical expressions. Students will then read pages 811-812 and 816-817 in their textbooks using the Insert Notes strategy. The class will then do several guided practice problems together. Finally, students complete a “VIP” Graphic Organizer.

**Essential Questions**:

* How can we combine radical expressions?

**Standards**:

* (NYS) Math A.N.3
* (CCSS) RST 2, 3, 4, 5, 7

**Reading Skills**:

* Activating prior knowledge
* Questioning the text
* Drawing inferences
* Determining importance
* Synthesizing

**Thinking Skills**:

* Predicting
* Differentiating
* Generalizing

**Writing/Speaking Skills**:

* Respond to text with post-its
* Transcribe to notebooks
* Complete Graphic Organizer

**Title: Operations on Radical Expressions**

|  |  |
| --- | --- |
| Objectives:  *At the end of the lesson, students will be able to…* | Assessments:*I will know they can do this because they will…* |
| 1. Add, subtract, multiply and divide radical expressions | 1. Do sample problems and HW |

## Pre-Reading

**Procedure before Reading**:

1. Complete the attached “Anticipation Guide”

**During Reading**

**Procedure while Reading**:

1. Instruct students in the Insert Notes strategy - students should use post-it notes to mark text in two ways: “New information I understand” and “Information I do not understand”
2. Students will read pp811-812 and 816-817 in the textbook while using the Insert Notes strategy
3. Direct students to transfer post-it information to a page in their notebooks that has been set up with two columns.

## Post-Reading

**Procedure after Reading:**

1. After answering students’ questions from their “Information I do not understand” notes, class will do several guided practice problems.
2. Students will complete a “VIP” graphic organizer.

**Learning Styles: Visual Auditory**

**Materials**:

* Anticipation Guide
* Textbooks, post-it notes
* “VIP” graphic organizer

\*Please attach all student handouts

Anticipation Guide

Operations on Radical Expressions

Indicate whether you agree or disagree with the following statements by circling the appropriate letter:

A D 1. Radical expressions can be added, subtracted, multiplied or divided.

A D 2. Combining radical expressions is like combining fractions

A D 3. We can talk about “like radicals” similarly to the way we talk about “like terms.”

A D 4. cannot be added to .

A D 5. We can use the distributive property with radical expressions.

Very Important Points

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Important things to remember about Multiplying and Dividing Radical Expressions

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Important things to remember about Adding and Subtracting Radical Expressions

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Here are some examples of things I need to keep in mind:

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